

Demonstration of Why It Is Wrong to Reduce Slice Percentages for New CHWM When Augmentation Is Not Needed

Baseline Assumptions – Tier 1 System Production and Total RHWMS	
Tier 1 System Capability (forecast firm energy)	800 aMW
Aggregate Preference Customers' RHWMS	800 aMW
Forecast Secondary Energy Production	25% of Firm Capability (200 aMW)
Forecast Surplus Energy for each aMW of Firm Production	.25 aMW
Aggregate Forecast Tier 1 Production (firm and secondary)	1,000 aMW

Under these assumptions, for each aMW of RWHM to which a CHWM customer is entitled the customer will get .25 aMW of secondary energy production (as a revenue credit for load following/block customers, as delivered secondary for slice customers).

Load Following Customer Example:

Under these baseline assumptions, a Load Following customer with a 40 aMW RWHM would expect to receive 5% of the surplus production (in the form of a revenue credit), equal to the proceeds from the sale of 10 aMW of secondary energy.

Load Following Customer's Expected Firm and Secondary Entitlement	
RWHM	40 aMW (5% of 800 aMW)
Forecast Share of Secondary Energy Production	10 aMW (5% of 200 aMW or .25 of 40 aMW)
Share of Forecast Aggregate Tier 1 Production	50 aMW (5% of 1,000 aMW)

Slice Customer Example:

Under these baseline assumptions, a Slice Customer with a 10% Slice Percentage would be entitled to 10% of the Aggregate Tier 1 Production (100 aMW on a forecast basis, of which 80 aMW would be firm and 20 aMW would be secondary).

Slice Customer's Expected Firm and Secondary Entitlement	
Slice Percentage	10%
Firm Slice Component	80 aMW (10% of 800 a MW)
Surplus Slice Component	20 aMW (10% of 200 aMW or .25 of 80 aMW)
Aggregate Slice Deliveries (forecast firm and secondary)	100 aMW (10% of 1,000 aMW)

VARIATION 1 – NEW RHWM OF 200 MW, AUGMENTATION OF 200 aMW

Tier 1 System Capability (forecast firm energy as augmented)	1,000 aMW (800 aMW plus 200 aMW augmentation)
Aggregate New and Existing Customers' RHWM	1,000 aMW
Forecast Secondary Energy Production	25% of Unaugmented Firm Capability (200 aMW)
Forecast Surplus Energy for each aMW of Firm Production	.20 aMW
Aggregate Forecast Tier 1 Production (firm with augmentation and secondary)	1,200 aMW

Under this variation, for each MW of RWHM a CHWM customer is entitled to, on a forecast basis the customer will get .20 aMW of secondary energy production (as a revenue credit for Load Following/Block customers, as delivered secondary for Slice customers).

Load Following Customer Example:

Under this revised set of assumptions, a Load Following customer with a 40 aMW RWHM would expect to receive 4% of the surplus production (in the form of a revenue credit), equal to the proceeds from the sale of 8 aMW of secondary energy

Load Following Customer's Expected Firm and Secondary Entitlement	
RHWM	40 aMW (4% of 1,000 aMW)
Forecast Share of Secondary Energy Production	8 aMW (4% of 200 aMW or .20 of 40 aMW)
Share of Forecast Aggregate Tier 1 Production	48 aMW (4% of 1,200 aMW)

VARIATION 1 – NEW RHWM OF 200 MW, AUGMENTATION OF 200 aMW (continued . .)**Slice Customer Example:**

Under this revised set of assumptions, the Slice Customer that previously was entitled to 10% of the Aggregate Tier 1 Production would have to have its Slice Percentage adjusted, so that the aMW of firm production to which it is entitled would remain at 80. Thus, the Slice Percentage would be adjusted to 8% (96 aMW on a forecast basis, of which 80 aMW would be firm and 16 aMW would be secondary).

Slice Customer's Expected Firm and Secondary Entitlement	
Slice Percentage	8%
Firm Slice Component	80 aMW (8% of 1,000 a MW)
Surplus Slice Component	16 aMW (8% of 200 aMW or .20 of 80 aMW)
Aggregate Slice Deliveries (forecast firm and secondary)	96 aMW (8% of 1,200 aMW)

New Customer Example:

Under this revised set of assumptions, a new customer (assumed to be non-Slice) has been awarded 200 aMW of new CHWM, and also has a RHWM of 200 aMW. The system has been augmented by 200 aMW to accommodate this new CHWM, but this 200 aMW of augmentation has no associated secondary energy capability. The 200 aMW of RHWM would represent 20% of the Tier 1 System Capability, and, like all customers under this scenario, the new customer would be entitled to .20 aMW of secondary production for every aMW of firm production (for this customer, that would add up to 40aMW). Thus, the new customer would be entitled 20% of the Aggregate Tier 1 Production (240 aMW on a forecast basis, of which 200 aMW would be firm and 40 aMW would be secondary).

New Customer's Expected Firm and Secondary Entitlement	
RHWM	200 aMW (20% of 1,000 aMW)
Forecast Share of Secondary Energy Production	40 aMW (20% of 200 a MW or .20 of 200 aMW)
Share of Forecast Aggregate Tier 1 Production	240 aMW (20% of 1,200 aMW)

VARIATION 2 – NO NEW CHWM, NO AUGMENTATION, LOSS OF 200 aMW of RHWM

Tier 1 System Capability (forecast firm energy)	800 aMW
Aggregate Preference Customers' RHWM	600 aMW
Forecast Secondary Energy Production	25% of Firm Capability (200 aMW)
Forecast Surplus Energy for each aMW of Firm Production	.25 aMW
Aggregate Forecast Tier 1 Production (firm and secondary)	1,000 aMW

Under this second variation, for each MW of RWHM a given CHWM customer is entitled to, on a forecast basis, .25 MW of secondary energy production (in the form of a revenue credit for Load Following and Block customers, and in the form of delivered secondary for Slice customers). In addition, there would be 200 aMW of spare Tier 1 System Capability (not needed to serve RWHM). The revenue from the sale of this surplus firm energy would be credited to the Tier 1 Composite Cost Pool.

Load Following Customer Example:

Under this further revised set of assumptions, a Load Following customer with a 40 aMW RWHM would expect to receive 5% of the surplus production (in the form of a revenue credit), equal to the proceeds from the sale of 10 aMW of secondary energy

Load Following Customer's Expected Firm and Secondary Entitlement	
RWHM	40 aMW (5% of 800 aMW)
Forecast Share of Secondary Energy Production	10 aMW (5% of 200 a MW or .25 of 40 aMW)
Share of Forecast Aggregate Tier 1 Production	50 aMW (5% of 1,000 aMW)

Slice Customer Example:

Under this further revised set of assumptions, a Slice Customer with a 10% Slice Percentage would be entitled to 10% of the Aggregate Tier 1 Production (100 aMW on a forecast basis, of which 80 aMW would be firm and 20 aMW would be secondary).

Slice Customer's Expected Firm and Secondary Entitlement	
Slice Percentage	10%
Firm Slice Component	80 aMW (10% of 800 a MW)
Surplus Slice Component	20 aMW (10% of 200 aMW or .25 of 80 aMW)
Aggregate Slice Deliveries (forecast firm and secondary)	100 aMW (10% of 1,000 aMW)

**VARIATION 3 – NEW RHWM OF 200 MW, EXISTING CUSTOMERS LOSE 200 aMW OF RHWM,
NO AUGMENTATION**

Tier 1 System Capability (forecast firm energy)	800 aMW
Aggregate New and Existing Customers' RHWM	800 aMW
Forecast Secondary Energy Production	25% of Firm Capability (200 aMW)
Forecast Surplus Energy for each aMW of Firm Production	.25 aMW
Aggregate Forecast Tier 1 Production (firm and secondary)	1,000 aMW

Under this third variation, for each MW of RWHM a given existing or new CHWM customer is entitled to, on a forecast basis the customer will get .25 MW of secondary energy production (in the form of a revenue credit for Load Following and Block customers, and in the form of delivered secondary for Slice customers).

Load Following Customer Example:

Under this final set of assumptions, a Load Following customer with a 40 aMW RWHM would expect to receive 5% of the surplus production (in the form of a revenue credit), equal to the proceeds from the sale of 10 aMW of secondary energy.

Load Following Customer's Expected Firm and Secondary Entitlement	
RHWM	40 aMW (5% of 800 aMW)
Forecast Share of Secondary Energy Production	10 aMW (5% of 200 a MW or .25 of 40 aMW)
Share of Forecast Aggregate Tier 1 Production	50 aMW (5% of 1,000 aMW)

**VARIATION 3 – NEW RHWM OF 200 MW, EXISTING CUSTOMERS LOSE 200 aMW OF RHWM,
NO AUGMENTATION (continued . .)**

Slice Customer Example:

Under this final set of assumptions, a Slice Customer with a 10% Slice Percentage would be entitled to 10% of the Aggregate Tier 1 Production (100 aMW on a forecast basis, of which 80 aMW would be firm and 20 aMW would be secondary).

Slice Customer's Expected Firm and Secondary Entitlement	
Slice Percentage	10%
Firm Slice Component	80 aMW (10% of 800 a MW)
Surplus Slice Component	20 aMW (10% of 200 aMW or .25 of 80 aMW)
Aggregate Slice Deliveries (forecast firm and secondary)	100 aMW (10% of 1,000 aMW)

If the Slice Customer's Slice Percentage were reduced, in the same manner as it was reduced when there was 200 MW of new RHWM accompanied by 200 MW of Augmentation, then the result would be as shown in the table below. (Note for simplicity it is assumed that the reduction would be from 10% to 8% although this is probably not the precise mathematical result.)

Slice Customer's Expected Firm and Secondary Entitlement with Erroneous Adjustment	
Slice Percentage	8%
Firm Slice Component	64 aMW (8% of 800 a MW)
Surplus Slice Component	16 aMW (8% of 200 aMW)
Aggregate Slice Deliveries (forecast firm and secondary)	80 aMW (8% of 1,000 aMW)

This would be an anomalous result, because, as shown above, a Load Following customer would have kept the full amount of its original secondary revenue credit (as compared to the baseline case). In each instance, the Load Following customer gets the revenue from 10 aMW of secondary energy sales.

VARIATION 3 – NEW RHWM OF 200 MW, EXISTING CUSTOMERS LOSE 200 aMW OF RHWM, NO AUGMENTATION (continued . . .)

In contrast, the Slice customer gets 20 aMW of secondary energy in the baseline scenario, but only 16 aMW of secondary energy under this Variation 3. Yet even if the Slice customer is kept whole (does not have its Slice percentage reduced), there is “room” on the existing Tier 1 System to give the new customer its full share of secondary benefits (percentage of secondary equal to its percentage of firm). *See example below.*

New Customer Example:

Under this final set of assumptions, a new customer (assumed to be non-Slice) has been awarded 200 aMW of new CHWM, and also has a RHWM of 200 aMW. The system has not been augmented, because due to 200 aMW loss of existing customers’ RHWM, there is sufficient firm capability on the Tier 1 System to accommodate this new CHWM. The 200 aMW of RHWM would represent 25% of the Tier 1 System Capability, and, like all customers under this scenario, the new customer would be entitled to .25 aMW of secondary production for every aMW of firm production (for this customer, that would add up to 50 aMW). Thus, the new customer would be entitled 25% of the Aggregate Tier 1 Production (250 aMW on a forecast basis, of which 200 aMW would be firm and 50 aMW would be secondary).

New Customer’s Expected Firm and Secondary Entitlement	
RHWM	200 aMW (25% of 800 aMW)
Forecast Share of Secondary Energy Production	50 aMW (25% of 200 a MW or .25 of 200 aMW)
Share of Forecast Aggregate Tier 1 Production	250 aMW (25% of 1,000 aMW)

Analysis:

If a new customer can be served from existing capacity made available due to the loss of existing customer’s RHWM, the new customer is better off because augmentation is not needed, just as all other customers with RHWMs are. Under Variation 1, in which there was 200 MW of augmentation to accommodate the new customer, the new customer’s share of secondary capacity was 40 aMW (20% of its firm entitlement of 200 aMW). Here, with Variation 3, the new customer’s share of secondary capacity was 50 aMW (25% of its firm entitlement of 200 aMW).

VARIATION 3 – NEW RHWM OF 200 MW, EXISTING CUSTOMERS LOSE 200 aMW OF RHWM, NO AUGMENTATION (continued . .)

Similarly, under this Variation 3, a Load Following customer that was entitled to the proceeds of 10 aMW of secondary energy sales in the baseline case (25% of its firm entitlement of 40 aMW) continues to receive the proceeds from the same 10aMW of secondary energy sales.

If, on the other hand, a Slice Customer is forced to give up a portion of its Slice Percentage (reduced from 10% to 8%), then the Slice customer has given up 4 aMW of surplus to which it would have been entitled (16 aMW under this Variation 3 as compared to 20 aMW in the baseline case). The Slice customer has suffered a 20% loss of its secondary entitlement, which is neither necessary nor equitable as compared to the treatment of all other customers, both new and existing.